

**REMARKS**

Claims 1-11 are pending and under consideration in the above-identified application.

Claims 12-20 stand withdrawn from consideration.

In the Office Action of February 17, 2009, claims 1-11 were rejected.

With this Amendment, claims 1-3 and 5-11 are amended and claim 4 is cancelled.

**I. 35 U.S.C. § 102 Anticipation and § 103 Obviousness Rejections of Claims**

Claims 1-4, 6-7 and 11 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Inagaki* (U.S. 6,765,246) (“*Inagaki*”).

Claims 5 and 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Inagaki* in view of *Komatsu* (JP 02002231924) (“*Komatsu*”).

Applicant respectfully traverses both of these rejections.

In relevant part, independent claim 1 recites a channel stop region, separate from a impurity region, which has a higher impurity concentration than the impurity region and is located between photo-sensors adjacent to each other along a transfer direction of a transfer register and in the vicinity of the surface of a semiconductor region.

Nowhere do *Inagaki* or *Komatsu* disclose a channel stop region, separate from a impurity region, which has a higher impurity concentration than the impurity region and is located between photo-sensors adjacent to each other along a transfer direction of a transfer register and in the vicinity of the surface of a semiconductor region. Instead, *Inagaki* merely discloses a channel stop region formed on the surface of a semiconductor region without disclosing anything pertaining to the impurity concentration of the channel stop region in relation to any other impurity region. See, U.S. 6,765,246, Col. 6, l. 34-38. *Komatsu* fails to

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disclose any type of channel stop region, much less a channel stop region comprised of an impurity region with a higher impurity concentration than a separate impurity region.

As the Applicant's specification discloses, by providing a channel stop region, separate from a impurity region, which has a higher impurity concentration than the impurity region and is located between photo-sensors adjacent to each other along a transfer direction of a transfer register and in the vicinity of the surface of a semiconductor region, the discharge of the overflow barrier to the surface of the semiconductor substrate can be achieved more efficiently. See, U.S. Pat. Pub. No. 2006/0163619, Para. [0043].

Therefore, because *Inagaki*, *Komatsu* or any combination of them fails to disclose, or even fairly suggest, every feature of claim 1, the rejection of claim 1 cannot stand. Because claims 2-3 and 5-11 depend either directly or indirectly from claim 1, they are allowable for at least the same reasons.

**Conclusion**

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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